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FUJII TOSHIKI**(54) **VACUUM FILM FORMING DEVICE**

(57) Abstract:

PURPOSE: To coat the surface of a substrate with a film having decreased defects by irradiating a photoelectron releasing member with electromagnetic waves to release photoelectrons and capturing the fine particles electrified by the photoelectrons in the sputtering chamber of the vacuum film forming device.

CONSTITUTION: The photoelectron releasing member 31 (gold plated stainless steel) kept at a negative potential and a capturing plate 33 (stainless steel) kept at a positive potential are disposed via an electrical insulator 34 in the lower part of the sputtering chamber 12 of a vacuum chamber consisting of a charging chamber 11 and the sputtering chamber 12. A UV lamp 32 is provided in the upper part of the sputtering chamber 12. A UV lamp 32 is lighted and the photoelectron releasing member 31 is irradiated with UV rays. A voltage is impressed to this photoelectron releasing member 31 and the inside of the sputtering chamber 12 is evacuated to a vacuum. The fine particles in the vacuum chamber are, therefore, electrified and captured by the photoelectrons released from the photoelectron releasing member 31. The sputtering of a

base body 20 is executed in this vacuum chamber, by which the surface of the base body is coated with the film having the decreased defects, such as pinholes.

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